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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,571	03/11/2004	Akihiro Moto	033035M143	4805
7590	12/01/2006			EXAMINER FLORES RUIZ, DELMA R
Smith, Gambrell & Russell Suite 800 1850 M Street, N.W. Washington, DC 20036			ART UNIT 2828	PAPER NUMBER

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

*Supplementary*  
Office Action Summary

	Application No.	Applicant(s)
	10/797,571	MOTO, AKIHIRO
	Examiner Delma R. Flores Ruiz	Art Unit 2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 11 March 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1, 3-6, and 8-9 is/are rejected.
- 7) Claim(s) 2, 7, 10 - 17 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/21/2004.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 05/21/2004 have been considered by the examiner.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Figures 1, 2, 3, characters 25 and 23

Figure 3, Character 49

Figures 4, 5, 11, Character 15b and

Figure 14, Characters 77a, 77b, 77f and 77g.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

In Paragraph [0065], Characters: light-emitting module 2, and lead terminal from 79a,

In Paragraph [0066], Characters: conductive layer 61c, bonding wire 83, drive 65, laser diode 67, and

In Paragraph [0068], Character V-groove 61f.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

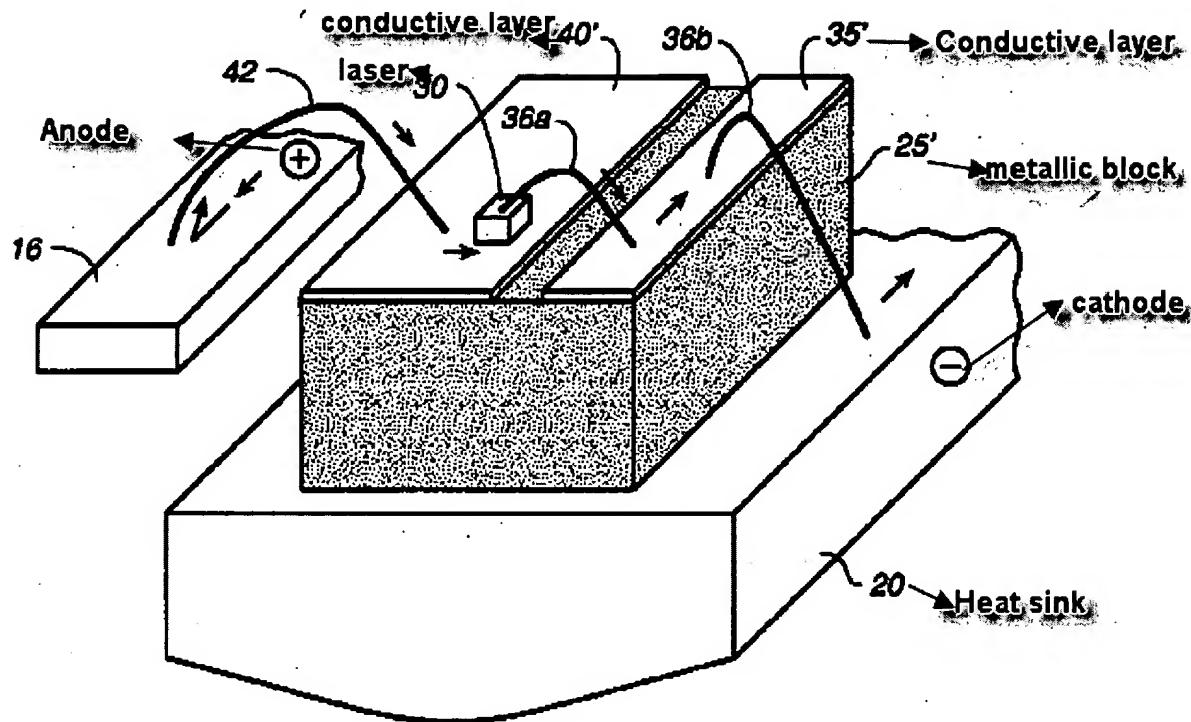
Claims 1, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida (6,301,278).

***Regarding claim 1,*** Uchida discloses in Figure 11 and 12 a light-transmitting module, comprising: a stack of a metallic block (see Fig. 11, Character 25', Column 2, Lines 20 – 21), an insulating heat sink (21 see Fig. 11, Character 20) mounted on said

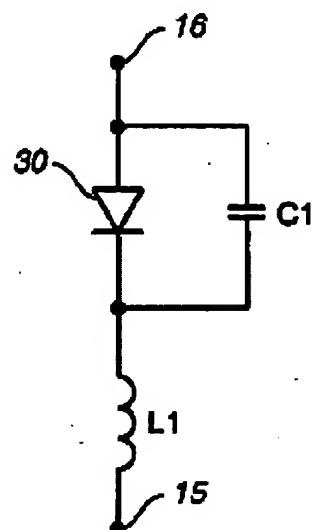
metallic block and an electrically conductive layer (see Fig. 11, Characters 35' and 40') formed on said insulating heat sink, said stack forming a parallel-plate capacitor; and a laser diode (see Fig. 11, Character 30) having an anode and a cathode, said laser diode being mounted on said conductive layer such that said anode faces and is in contact with said conductive layer (Column 1, Lines 31 – 34, Column 2, Lines 11 – 41 and Column 3, Lines 1 – 10) .

*Regarding claim 6*, Uchida discloses in Figure 11 and 12 a light-transmitting module, comprising: a stack of an electrically conductive heat sink (see Fig. 11, Character 25', Column 2, Lines 20 – 21), an insulating layer provided on said heat sink (see Fig. 11, Character 20) and an electrically conductive layer (see Fig. 11, Characters 35' and 40'), said stack forming a parallel-plate capacitor; and a laser diode (see Fig. 11, Character 30) mounted having an anode and a cathode, said laser diode being mounted on said conductive layer such that said anode faces and is in contact with said conductive layer (Column 1, Lines 31 – 34, Column 2, Lines 11 – 41 and Column 3, Lines 1 – 10)

Figures 11 and 12 by Uchida ('278).



**FIG. 11 (PRIOR ART)**



**FIG. 12  
(PRIOR ART)**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 8, 9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (6,301,278) in view of Cohen (5,615,224).

***Regarding claims 3, 4, 8 and 9,*** Uchida discloses the claimed invention except for diode laser comprising an n-type and p-type substrate, cladding, active, anode and cathode. However, it is well known in the art to apply the n-type and p-type substrate, cladding, active, anode and cathode as disclosed by Cohen in Figures 4 – 5, Column 9, Lines 32 – 56. Therefore, it would have been obvious to a person having ordinary skill in the art to apply the well known n-type and p-type substrate, cladding, active, anode and cathode as suggested by Cohen to the diode laser of Uchida, because these layers are essential part of diode laser, that is could be used to transmit certain type of coherent light Figure 4 – 5 of Cohen.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (6,301,278) in view of Kimizuka (6,633,598).

***Regarding claim 5***, Uchida discloses the claimed invention except for driver. However, it is well known in the art to apply the drive as disclosed by Kimizuka in Column 6, Lines 10 – 11. Therefore, it would have been obvious to a person having ordinary skill in the art to apply the well known driver as suggested by Kimizuka to the diode laser of Uchida, because it will could be used to guide the current of the laser see Column 6, Lines 10 - 11 of Kimizuka.

#### ***Allowable Subject Matter***

Claims 2, 7, 10 – 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

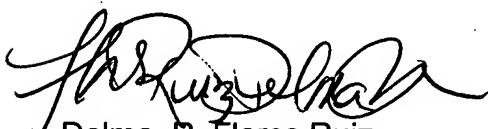
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

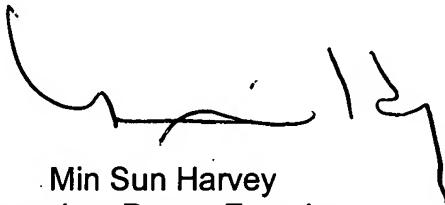
Art Unit: 2828

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Delma R. Flores Ruiz  
Examiner  
Art Unit 2828  
DRFR/MH  
March 9, 2006



Min Sun Harvey  
Supervisor Patent Examiner  
Art Unit 2828